American Petroleum Institute
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Monthly Statistical Report

Finance, Accounting, and Statistics Department

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SUMMARY

Although the low-sulfur diesel market got off to a bumpy start in some locations due to flood-related pipeline problems in the Midwest and a combination of refinery and other problems in California, October's deliveries of the EPA-mandated fuel, at over 1.8 million B/D, exceeded estimates of underlying consumption.

At refineries, October's distillate output jumped 7.0 percent to nearly 3.5 million B/D—its highest monthly level in more than 15 years. Output of low-sulfur diesel surged to 1.9 million B/D during the latter half of the month and averaged nearly 1.8 million B/D for October as a whole. Most of that went to market, while high-sulfur distillate went to build stocks for the heating season. By month-end, the situation was clearly improving and prices for low-sulfur diesel were dropping.

Meanwhile, total petroleum deliveries dropped 2.0 percent for October, their first significant year-to-year decline since May. However, the drop was mainly the result of substantial declines for residual fuel oil and "other oils". Deliveries of major light products continued to show growth roughly consistent with or stronger than recent prior patterns.

Gasoline deliveries rose 1.8 percent, marginally ahead of estimated consumption growth, and distillate deliveries jumped 4.7 percent despite weather warmer than last year in major heating-oil-consuming regions. Kerosine jet fuel deliveries rose 1.7 percent, reflecting both a continued rise in air traffic and the military switch to kerosine-based jet fuel. Residual fuel oil deliveries, on the other hand, fell nearly 300 thousand B/D or 25 percent, and deliveries of "other oils", 175 thousand B/D or 3.8 percent.

Despite the boost to Alaskan production from partial completion of the gas-handling project on the North Slope and the coming onstream of the Point McIntyre field, Alaskan production still fell 77 thousand B/D or 4.5 percent for October. For the U.S. as a whole, crude oil production still fell in October by 3.4 percent, or 241 thousand B/D versus one year earlier.

Imports rose 3.8 percent versus last October, with both crude and products showing year-to-year increases. Total inventories rose 12 million barrels, including an 11 million barrel rise in distillate stocks.

PRODUCT SUPPLIED

Gasoline

OXYGENATED RISES TO 24 PERCENT OF DELIVERIES.

For October, gasoline deliveries rose 1.8 percent, slightly ahead of estimated consumption growth of around 1 percent or so. Oxygenated gasoline had already accounted for a little less than 15 percent of deliveries in September as the distribution system was being readied for the beginning of the oxygenate season. With oxygenate requirements beginning in October for roughly a third of the EPA-designated carbon monoxide non-attainment areas, oxygenated gasoline's share of total gasoline deliveries rose to 24 percent.

Meanwhile, highway travel has been showing steady growth, even edging up slightly. Second quarter growth in travel had averaged 2.7 percent versus the prior year, while July and August increases, the latest available, inched up to roughly 3.0 percent. This rate has likely continued in more recent months.

October also marked the increase in Federal gasoline taxes by 4.3 cents per gallon. With the addition of the most recent tax, approximately one third, or a little over 40 cents, of the average retail gasoline price goes to excise taxes—18.4 cents for the Federal excise tax, and a national average of 22 cents for state and local taxes.

Distillates

DELIVERIES OF LOW-SULFUR EXCEED 1.8 MILLION B/D.

The low-sulfur diesel market got off to an uneven start in some regions in October, though the situation was clearly improving by month-end. Beginning October 1, diesel for on-highway use—nearly half the market for distillate fuel oil—was required by EPA to contain no more than .05 percent sulfur, or roughly a fifth of average prior levels. California regulations also added tighter specifications for aromatics.

	API ESTIMATES OCTOBER		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	17.2	(2.0)	17.0	0.2
Crude production	6.9	(3.4)	6.8	(4.8)
Total imports	8.8	3.8	8.4	6.8
Stocks (million bbl)	1,091	2.2	na	na

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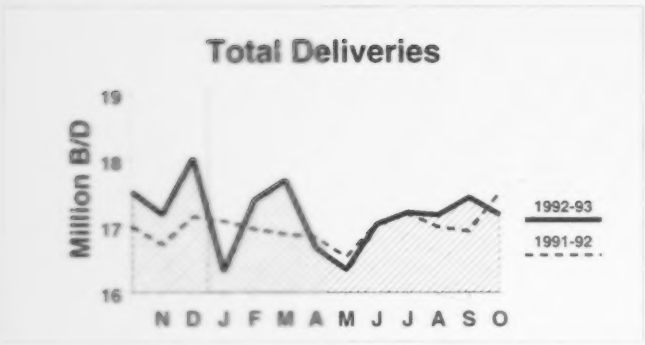
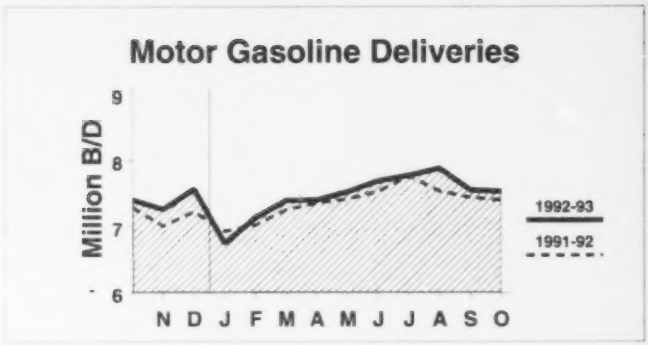
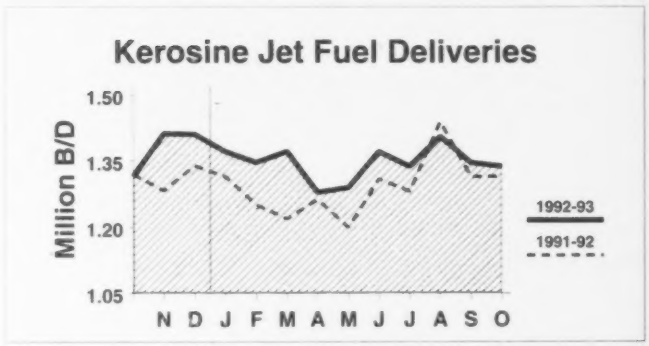






Although production of low-sulfur diesel at refineries had been rising steadily over the past several months in anticipation of the October 1 deadline, and primary-level stocks of low-sulfur product had reached nearly 45 percent of total distillates by the beginning of the month, flood-related pipeline problems in the Midwest and a combination of refinery and other problems in California resulted in some supply imbalances. National average retail prices, including the 4.3 cent per gallon increase in Federal excise taxes, were bid up roughly 15 cents from early September to mid-October, and in the Midwest and California by at least 20 to 25 cents for the same period. The EPA, in recognizing the transitional problems, temporarily granted enforcement discretion for users who could show that they had made an effort to locate low-sulfur product. California also loosened its requirements by temporarily limiting its mandate to on-highway uses.

With refineries cranking out low-sulfur distillate at nearly 2 million B/D during the second half of the month, the situation by month-end appeared to be improving and prices were beginning to fall. For the month as a whole, over 1.8 million B/D of low-sulfur distillate was supplied, well above estimated annual consumption of 1.4-1.6 million B/D, and amounted to 57 percent of all distillate deliveries.

As for the off-highway sector, warmer weather in the Northeast compared with last October dampened consumption by an estimated 50 thousand B/D versus a year ago. Even so, total distillate deliveries were up 4.7 percent from last October, likely pushed up by the surge in low-sulfur deliveries.

Kerosine Jet Fuel

1.7 PERCENT RISE PUTS DELIVERIES NEAR RECORD.

Growth in both the passenger and air cargo segments of the commercial aviation sector resulted in October's jet fuel deliveries increasing by 22 thousand B/D, or 1.7 percent year to year. At 1.337 million B/D, this October's delivery level had been exceeded only once, in October 1990 when Operation Desert Shield's military airlift pushed deliveries up over 1.4 million B/D. For the year-to-date, deliveries have increased by 4.3 percent.

Given that October falls between the summer and holiday vacation seasons, it has traditionally been one of the slowest months of the year for air travel. Based on preliminary estimates for total air-miles flown, it appears that air travel was relatively strong for the early fall. For the month, total air-miles flown increased just over 1 percent compared to the same period last year. In addition, the air cargo sector also indicated continued growth. Through September, the most recent month available, air cargo miles increased nearly 4 percent. For air freight, which accounts for nearly 85 percent of total cargo ton-miles, growth during the first nine months of the year was up 3.5 percent compared to last year.

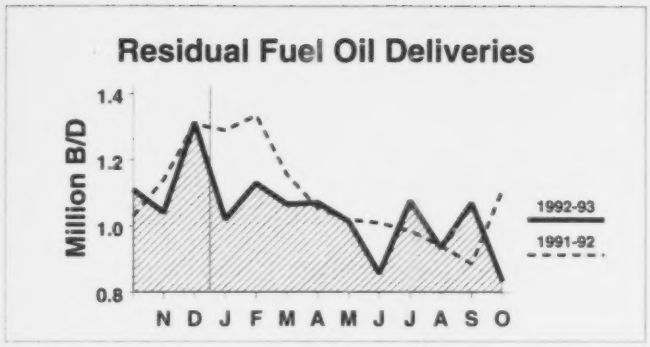
Although final figures are not yet available from the Defense Fuel Supply Center, it appears that military liftings of jet-kerosine have also contributed to the increase in deliveries. Military liftings of jet-kerosine averaged approximately 85 thousand B/D during the month, an increase of roughly 40 percent over a year ago. Most of this increase reflects the change from jet-naphtha to jet-kerosine for West Coast bases that went into effect October 1.

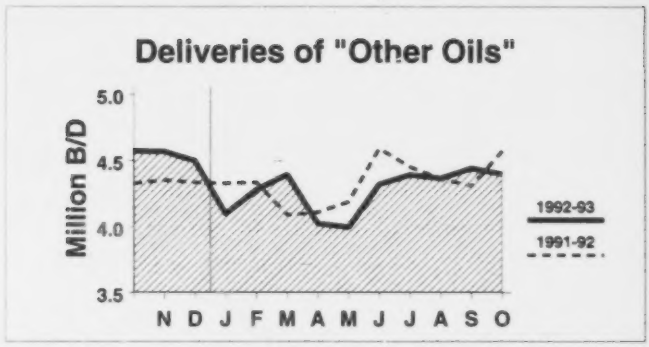
Residual Fuel Oil

OCTOBER REVERSES SEPTEMBER'S RISE.

In contrast to September's strong increase, deliveries of residual fuel oil declined sharply during October. At 833 thousand B/D, October deliveries were off 25 percent compared to the same period a year ago. This resulted in accelerating the year-to-date decline to approximately 7 percent.

Since October falls between the cooling and heating seasons, it has traditionally been one of the year's weakest months for resid





deliveries. Moderate temperatures in regions with heavy resid use combined with already-high end-user stocks curbed any growth in deliveries. In the Northeast, this October proved to be only moderately warmer than last, resulting in electricity generation levels being approximately the same as a year ago. In Florida, temperatures remained warm and thus increased October's number of cooling degree days by 20 percent year-to-year and electricity generation by 4-5 percent.

Although residual fuel prices had maintained a price advantage over natural gas during the past several months, prices for both products fell during October. This probably encouraged resid users to postpone incremental purchases in the event prices would fall further. With respect to resid, the spot price of resid containing less than 1 percent sulfur by weight averaged $15 per barrel during October, or approximately $2.40 per million BTU. Grades containing more than 1 percent sulfur by weight ranged from just over $10 per barrel to about $14.50 per barrel, or $1.66 to $2.30 per million BTU during the same period. These prices reflected declines between this October and last of 20 percent for low sulfur grades and between 18 to 27 percent for grades with higher sulfur content. With respect to natural gas, the October average near-term natural gas price of $2.21 per million BTU represented a decline of 7.4 percent from a year ago.

Other Oils

DOWN 3.8 PERCENT FOR THE MONTH.

Reversing September's unusual year-to-year increase, deliveries of "other oils" resumed the pattern of declines that has been the norm so far this year. October's deliveries drop amounted to 3.8 percent, or about 175 thousand B/D. In recent months, only deliveries of ethane, a major petrochemical feedstock, and asphalt have shown any positive year-to-year growth. Deliveries of most other components of the "other oils" category have continued to show year-to-year declines.

SUPPLY

Production

ALASKA'S DECLINE SLOWED BUT NOT REVERSED.

Despite the boost to Alaskan production from partial completion of the gas-handling project on the North Slope, U.S. crude oil production still fell in October by 3.4 percent, or 241 thousand B/D, versus one year earlier. Lower 48 production fell 3 percent, or 164 thousand B/D, compared with last October.

In Alaska, the GHX-2 project, to be completed next year, is currently capable of adding about 50 thousand B/D to Prudhoe Bay production at the stage finished in September. The Point McIntyre field also began production in the middle of October, at rate of about 80 thousand B/D, adding 40-50 thousand B/D to the month's average. Alaskan production as a whole was boosted to more than 1.6 million B/D, its highest level since March, but on a year to year basis, it still fell 4.5 percent or 77 thousand B/D. Although continued development in Alaska has slowed the decline in output there, it has not halted it by any means. Compared with peak Alaskan production of nearly 2.1 million B/D in early 1988, October's output was still down 22 percent or nearly half a million B/D.

Imports

INCREASES FOR BOTH CRUDE AND PRODUCTS.

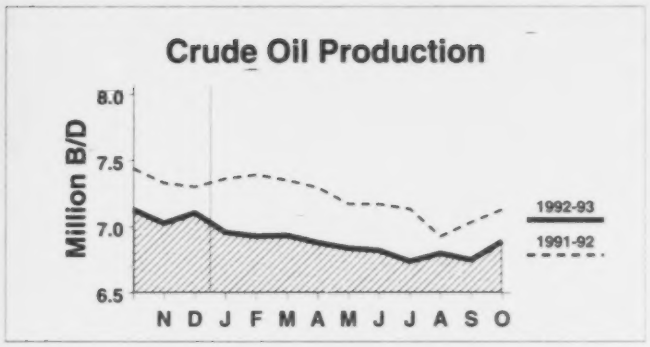
After two consecutive months of decline, October imports of refined products reversed that trend and increased by 37 thousand B/D, or 2.0 percent. This turnaround was the result of a 52 thousand B/D, 27 percent increase in motor gasoline imports that offset declines in imports of other refined products. The net increase in refined product imports combined with the 280 thousand B/D increase in crude oil imports resulted in a 3.8 percent year-to-year increase for all petroleum imports. For the year-to-date, total petroleum imports increased by 6.8 percent. However, because some of this year's imports went into greater stock building this year than last, the underlying growth in the need for imports we estimate to have been closer to 4-5 percent, or about 350 thousand B/D.

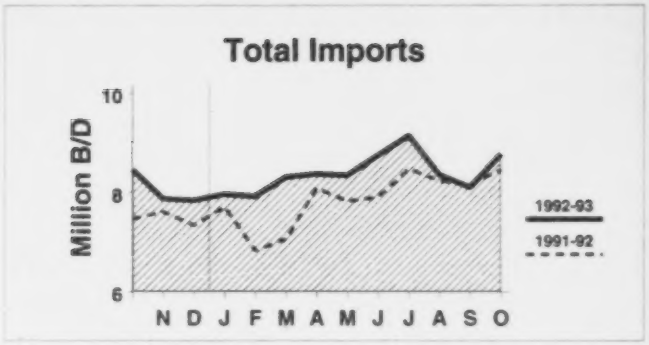
Aside from imports of motor gasoline, imports of all the other major refined products posted declines between this October and last. Kerosine jet fuel had a modest year-to-year decline of 2.4 percent compared to the declines in residual fuel oil and distillates. Imports of resid fell 22.3 percent year-to-year, or by 84 thousand B/D. This month's distillate imports, of which over half is now of the low-sulfur grade, declined 38 thousand B/D, or 14.4 percent, from a year ago.

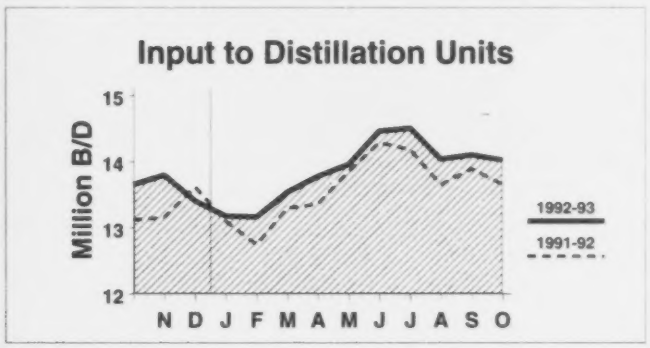
Refinery Operations

LOW-SULFUR OUTPUT REACHES NEARLY 1.8 MILLION B/D.

October's input to distillation units rose 2.7 percent from a year ago, and utilization averaged a strong 92.6 percent. Distillate production was up a robust 7.0 percent, to nearly 3.5 million B/D—its highest monthly level in more than 15 years. Output of low-sulfur distillate surged to 1.9 million B/D during the latter half of October and, for the month as a whole, averaged 1.8 million B/D. The share of output of low-sulfur distillate rose to over 51 percent from 45 percent in September.







Gasoline output rose 1.9 percent from last October to 7.4 million B/D. Including blending outside refineries, an estimated 28 percent of finished gasoline produced was oxygenated.

Kerosine jet fuel output, reflecting the small growth in deliveries, was down slightly, and residual fuel output fell 5.3 percent.

Inventories

CRUDE AND PRODUCTS INCREASE FROM SEPTEMBER'S LEVELS. Total inventories, which have often fallen during October in recent years, rose 12 million barrels to 1,091 million barrels compared with end-of-September levels. Most of the increase was in product stocks, particularly distillate fuel oil. However, crude stocks rose as well, by 3 million barrels to 332 million barrels, reversing two months of decline.

Distillate stocks' strong rise of 11 million barrels brought stocks to 138 million barrels. This was at the top end of the range of recent experience, no doubt reflecting in part the more complex logistics of supplying two grades of distillate where previously there had usually been only one. In recent prior years, distillate inventories have ranged from 122 to 138 million barrels at the end of October. With most of the surge in low-sulfur refinery output going to market rather than inventory, the stock build was mainly in high-sulfur distillate.

Gasoline stocks rose 2 million barrels to 210 million barrels over the month. Of the 173 million barrels of finished gasoline, oxygenated accounted for 16 percent of the total, up from 11 percent in September. However, these figures do not reflect all available supplies, since they do not include stocks of unblended MTBE or ethanol.

ESTIMATED UNITED STATES PETROLEUM BALANCE[1]
(Daily average in thousands of 42 gallon barrels)

Disposition and Supply	October			YEAR-TO-DATE		
	1993[2]	1992[3]	% Change	1993[4]	1992[3]	% Change
Disposition:						
Total motor gasoline	7,533	7,401	1.8	7,463	7,368	1.3
Finished oxygenated	1,792	na	na	957	na	na
Finished reformulated	0	na	na	0	na	na
Finished other	5,741	na	na	6,506	na	na
Naphtha-jet	80	165	(51.5)	116	147	(21.1)
Kerosine-jet	1,337	1,315	1.7	1,345	1,290	4.3
Distillate fuel oil	3,199	3,056	4.7	3,013	2,950	2.1
≤ 0.05 percent sulfur	1,826	na	na	598	na	na
> 0.05 percent sulfur	1,373	na	na	2,415	na	na
Residual fuel oil	833	1,110	(25.0)	1,006	1,077	(6.6)
All other oils (including crude losses)	4,395	4,568	(3.8)	4,267	4,332	(1.5)
Reclassified[5]	-204	-91	na	-173	-164	na
Total domestic products supplied	17,173	17,524	(2.0)	17,037	17,000	0.2
Exports	925	902	2.6	988	916	7.9
Total disposition	18,098	18,426	(1.8)	18,025	17,916	0.6
Supply:						
Domestic liquids production:						
Crude oil (including condensate)	6,885	7,126	(3.4)	6,849	7,192	(4.8)
Natural gas liquids	1,728	1,722	0.4	1,745	1,687	3.4
Other supply[6]	1,110	1,206	(8.0)	1,260	1,214	3.8
Total domestic supply	9,723	10,054	(3.3)	9,854	10,093	(2.4)
Imports:						
Crude oil (excluding SPR imports)	6,927	6,647	4.2	6,648	6,082	9.3
From Canada	938	761	23.3	887	796	11.4
All other	5,989	5,886	1.8	5,761	5,286	9.0
Products	1,847	1,810	2.0	1,766	1,800	(1.9)
Residual fuel oil	292	376	(22.3)	345	361	(4.4)
All other	1,555	1,434	8.4	1,421	1,439	(1.3)
Total imports	8,774	8,457	3.8	8,414	7,882	6.8
Total supply	18,497	18,511	(0.1)	18,268	17,975	1.6
Stock change, all oils	399	85	na	243	59	na
Refinery Operations:						
Input to crude distillation units	14,021	13,651	2.7	13,876	13,602	2.0
Operable capacity	15,145	15,287	(0.9)	15,155	15,490	(2.2)
Refinery utilization[7]	92.6	89.3	na	91.6	87.8	na
Crude oil runs	13,750	13,584	1.2	13,609	13,420	1.4

	October 1993	September 1993	October 1992	% Change From Month Ago	% Change From Year ago
Stocks (at month-end, in millions of barrels):					
Crude oil (excluding SPR stocks)	332.0	328.9	332.7	0.9	(0.2)
Unfinished oils	101.6	101.7	104.1	(0.1)	(2.4)
Total motor gasoline	210.3	208.4[R]	204.4	0.9	2.9
Finished oxygenated	27.3	19.8[R]	na	37.9	na
Finished reformulated	0.0	0.0	na	na	na
Finished other	145.7	152.0[R]	na	(4.1)	na
Blending components	37.3	36.7[R]	37.4	1.6	(0.3)
Naphtha-jet	3.2	3.2	4.6	0.0	(30.4)
Kerosine-jet	37.5	38.6	42.8	(2.9)	(12.4)
Distillate fuel oil	138.3	127.4	136.8	8.6	1.1
≤ 0.05 percent sulfur	56.5	55.3	na	2.2	na
> 0.05 percent sulfur	81.8	72.1	na	13.5	na
Residual fuel oil	43.8	41.5	45.0	5.5	(2.7)
All other oils	223.9	228.5[R]	196.4	(2.0)	14.0
Total all oils	1,090.6	1,078.2[R]	1,066.8	1.2	2.2

1—Total supply, i.e., production plus imports adjusted for net stock change is equal to total disposition from primary storage. Total disposition from primary storage less exports equals total domestic products supplied. Information contained in this report is derived from information published in the API *Weekly Statistical Bulletin* and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions. 2—Based on API estimated data converted to a monthly basis. 3—Source: U.S. Energy Information Administration (including any adjustments). 4—Data for most current two months are API estimates. Other data come from U.S. Energy Information Administration (including any adjustments). 5—An adjustment to avoid double counting resulting from differences in product classifications among different refineries and blenders. 6—Includes unaccounted-for crude oil, withdrawals from the SPR when they occur, processing gain, field production of other hydrocarbons and alcohol, and downstream blending of ethanol. 7—Represents "Input to crude oil distillation units" as a percent of "Operable capacity". R—Revised.